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29. (New) The package assembly as recited in claim 24 wherein high speed signals are routed over the connector and wherein power, ground and slower speed signals are routed over the first set of electrical contacts.

REMARKS

Claims 1-27 are pending in the application. By way of the present amendment, new claims 28-29 are being added. Claims 1-6, 15, 16, 18, 20, 22-24, 26 and 27 stand rejected under 35 U.S.C. § 102(e) as being anticipated by Tamarkin (U.S. Pat. No. 6,049,467). Claim 7 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Tamarkin in view of Ikesugi (U.S. Pat. No. 5,556,286). Claim 8 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Tamarkin in view of Pecono (U.S. Pat. No. 5,628,637). Claim 10 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Tamarkin in view of Miller (U.S. Pat. No. 5,130,894). Claim 11 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Tamarkin in view of Miremadi (U.S. Pat. No. 5,854,507). Claim 12 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Tamarkin in view of Khosrowpour (U.S. Pat. No. 6,477,593). Claim 13 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Tamarkin in view of Mostafazadeh (U.S. Pat. No. 5,783,870). Claims 14 and 17 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Tamarkin in view of Ito (U.S. Pat. No. 5,885,092).

The applicants appreciate the indication of allowable subject matter in claims 9, 19, 21, and 25.

The informality noted in claim 20 has been corrected by way of the present amendment.

New claims 28-29 have been added and recite novel features of the invention that are recited in claim 9.

With regards to claim 1, applicants respectfully submit that Tamarkin fails to teach the claimed apparatus. Specifically, applicants respectfully disagree that Tamarkin teaches that 13a and 13b in Fig. 1 are two IC packages as stated in the Office action in paragraph 5. Instead, Tamarkin clearly teaches in column 4, lines 27-29, that 13a and 13b are printed circuit boards. Applicants respectfully submit that the term "packages" is well known in the art, described in the

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specification e.g., in the last two full paragraphs on page 4 of the specification and also in the Description of Related Art. Accordingly, since Tamarkin fails to teach a first integrated circuit mounted in a first package the first package having a first set of electrical contacts and a first connector and a second integrated circuit mounted in a second package, the second package having a second set of electrical contacts in a second connector the second connector being electrically and physically coupled to the first connector, the first and second connectors being mating connectors, applicants respectfully submit that claim 1 and all claims dependent thereon are patentably distinguishable over Tamarkin.

With regards to claim 15, applicants respectfully submit that Tamarkin fails to teach electrically connecting the first integrated circuit through a first package connector to a second integrated circuit mounted in a second package having a second package connector, wherein the first and second package connectors are mating connectors. Applicants respectfully disagree with the Examiner's interpretation of Tamarkin and submit that 13a is not a first package as maintained by the Examiner but instead is a printed circuit board as described by Tamarkin in column 4, lines 27-29. Thus, since neither 13a nor 13b is a package as the Office action maintains, applicants respectfully submit claim 15 and all claims dependent thereon readily distinguish over Tamarkin.

With regards to claim 20, applicants respectfully submit that Tamarkin fails to disclose at least a second means for directly electrically coupling a packaged integrated circuit to a second package integrated circuit without coupling through the printed circuit board. The Office action maintains that the second means are connectors 20 on the upper surface of package 13a for directly electrically coupling the packaged IC 13a to a second packaged IC 13b without coupling through a printed circuit board pointing to Fig. 1 of Tamarkin. However, as applicants have pointed out above, 13a and 13b in Fig. 1 of Tamarkin are, in fact, printed circuit boards and not packages and all the integrated circuits shown in Fig. 1 of Tamarkin have to communicate with each other through the printed circuit boards 13a, 13b, and 12. Since Tamarkin fails to teach means for directly electrically coupling a packaged integrated circuit to a second packaged integrated circuit without coupling through the printed circuit board, applicants respectfully submit that claim 20 and all claims dependent thereon are patentably distinguishable over Tamarkin.

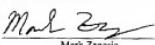
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With regards to claim 24, applicants respectfully submit that Tamarkin fails to teach an integrated circuit package that includes a first set of electrical contacts for coupling to a printed circuit board and a connector disposed on the surface of the package for coupling to a mating connector on another integrated circuit package. The Office action maintains that Tamarkin discloses an IC package 13a for an IC die 24 comprising a first set of electrical contacts in connectors 18 on the lower surface of package 13a for coupling to printed circuit board 12 and a connector 20 disposed on the upper surface of package 13a for coupling to a mating connector 18 on the lower surface of another IC package 13b. Applicants respectfully submit that neither 13a nor 13b are IC packages, and instead are clearly taught to be printed circuit boards by Tamarkin in column 4, lines 27-29. Accordingly, since Tamarkin fails to teach the claimed package having a connector disposed on its surface for coupling to a mating connector on another integrated circuit package, applicants respectfully maintain that claim 24 and all claims dependent thereon patentably distinguish over Tamarkin.

In view of the above amendments and remarks, applicants respectfully submit that all claims are now in condition for allowance and respectfully request a notice to that effect. In the event that the Examiner believes that any issues can be resolved by means of a telephone conference, the Examiner is respectfully requested to contact the undersigned at the number indicated below.

CERTIFICATE OF FACSIMILE TRANSMISSION

I hereby certify that this correspondence is being facsimile transmitted to the United States Patent and Trademark Office on the date shown below.



Mark Zagorin


Date

Respectfully submitted,



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MARKED-UP COPY OF AMENDED CLAIMS IN ACCORDANCE WITH
37 C.F.R. § 1.121(c)(1)(ii)

20. (Amended) An integrated circuit assembly comprising:
first means for electrically coupling a packaged integrated circuit to a printed circuit board;
second means for directly electrically coupling the packaged integrated circuit to a second packaged integrated circuit without coupling through [a] the printed circuit board

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MAR 26 2003

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Response to 02-08-01 ea

Application No.: 09/824,135